



Air Quality Summary—July 2010



Baton Rouge Area

OZONE

There was only one day that exceeded the National Ambient Air Quality Standard (NAAQS) for ozone in the Baton Rouge area during the month of July 2010. The LSU monitor reached 80 ppb or 111 AQI on July 23.

There were no Ozone Action Days during the month of July.

PM_{2.5}

There were no exceedances of the NAAQS for PM_{2.5} in the Baton Rouge area during the month of July 2010. Please see the chart on the next page for detailed information on PM_{2.5} levels throughout the state in July. Please note that the PM_{2.5} data for the month does not include data from the Port Allen site due to problems with the analyzer.

Other Areas of the State

OZONE

There were no days that exceeded the National Ambient Air Quality Standard (NAAQS) for ozone during the month of July 2010.

There were no Ozone Action Days during the month of July.

PM_{2.5}

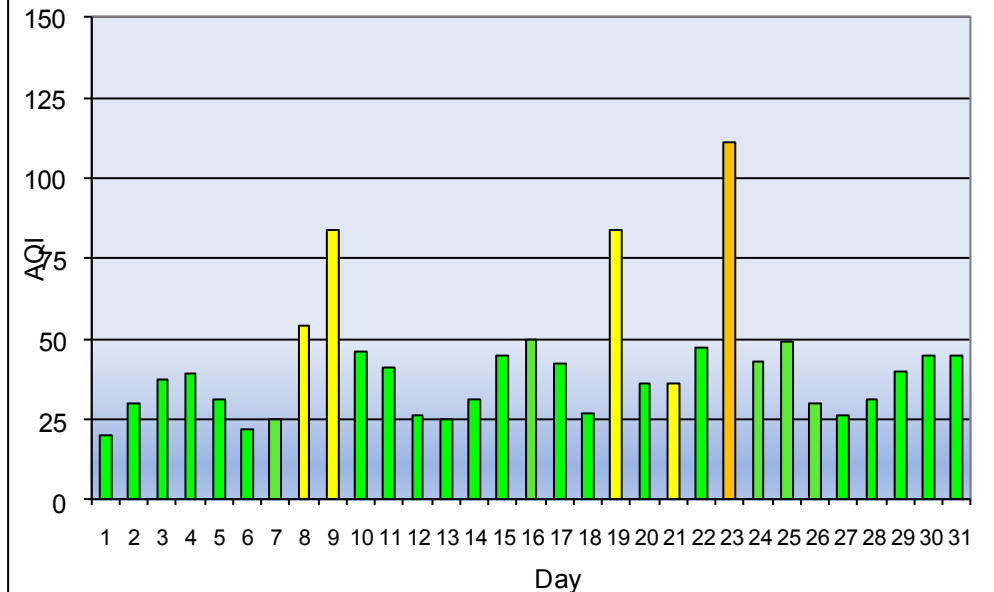
There were no exceedances of the NAAQS for PM_{2.5} in any area of the state during the month of July 2010. Please see the chart on the next page for detailed information on PM_{2.5} levels throughout the state in July.

Statewide 8-HR Ozone Readings /AQI Above 75 ppb

DATE	AQI	8-HR OZONE Concentration (ppb)	MONITORING SITE
7/23/10	111	80	LSU



**Baton Rouge Area Daily Maximum AQI For Ozone
JULY 2010**

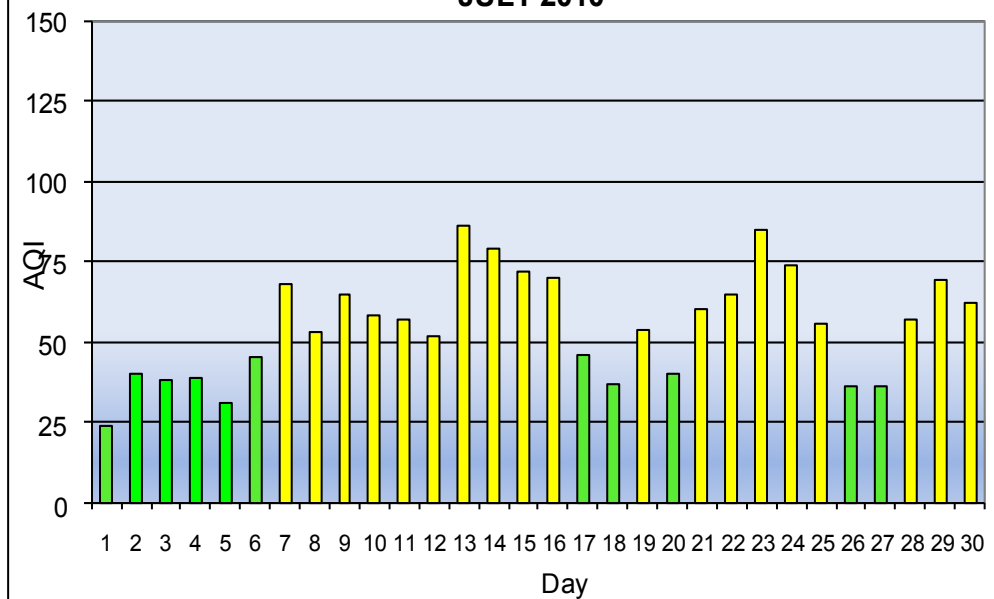


0-50	Good
51-100	Moderate
101-150	Unhealthy for Sensitive Groups
151-200	Unhealthy
201-300	Very Unhealthy

**Statewide High PM_{2.5} 24-Hour
Average Readings - July 2010**

DAY	UG/m3	AQI	SITE
1	7.5	24	Shreveport Airport
2	12.2	40	Westlake
3	11.8	38	Shreveport Airport
4	12	39	Shreveport Airport
5	9.7	31	Shreveport Airport
6	13.9	45	Kenner
7	22.4	68	Kenner
8	16.5	53	Shreveport Airport
9	21	65	Shreveport Airport
10	18.5	58	Westlake
11	17.9	57	Westlake
12	16	52	Chalmette Vista
13	29.8	86	Kenner
14	27	79	Chalmette Vista
15	24	72	Chalmette Vista
16	23.3	70	Westlake
17	14.2	46	Shreveport Airport
18	11.5	37	Shreveport Airport
19	16.7	54	Kenner
20	12.2	40	Capitol
21	19	60	Kenner, Chalmette Vista
22	21	65	Chalmette Vista
23	29.3	85	Kenner
24	24.7	74	Kenner
25	17.5	56	Shreveport Airport
26	11	36	Chalmette Vista
27	11	36	Chalmette Vista
28	18	57	Chalmette Vista
29	23	69	Chalmette Vista
30	20	62	Chalmette Vista
31	18.5	58	Kenner

**Statewide Daily Maximum AQI For PM_{2.5}
JULY 2010**



Baton Rouge Climate Summary—July 2010

*Prepared by: Jay Grymes

(based on available preliminary data as of September 5, 2010)

'Heat' continues to be the number one weather story for the 2010 summer in and around Baton Rouge. After near-record heat for May and June, July continued the trend. Baton Rouge's Metro Airport reported a monthly average temperature of 83.8°F for July, ranking as the 8th 'warmest' July since at least 1905. As a result of our recent run of unusually-warm weather, the three-month period of May, June and July ranks as the 'warmest' on record for that period.

All but two days -- July 6th and 18th -- averaged above-normal in terms of daily temperatures. Highs reached the 90°s on 25 days, near the long-term average for July. Afternoon maximums of 95° or above were recorded on six dates, with the monthly extreme of 97° occurring on the 31st. Interestingly, daily *minimums* were above normal for all but one date -- July 28th -- reflecting the persistent humidity that marked July's weather. Indeed, the elevated minimums were a key factor contributing to July's warmth.

Record summer heat means record demands on air-conditioning. For the period of May through July 2010, accumulated Cooling Degree-Days (CDDs, an index of cooling demand) for Metro Airport total approximately 120% of normal, the highest CDD total for this period on record (since 1930).

(Note: May-June-July periods for 2009 and 2008 also are ranked among the top four -- 3rd & 4th, respectively -- for average temperatures and accumulated CDDs, with 1998 ranked as the 2nd 'warmest' for the period.)

Table 1: Average "daylight hours" sky conditions (to 12,000 ft) during July 2010, based on automated ASOS observations from Baton Rouge's Metro Airport.

Sky Condition: Sunrise to Sunset (Sky Coverage)	Clear to Mostly Sunny (0/10ths – 3/10ths)	Partly Cloudy / Partly Sunny (4/10ths – 6/10ths)	Mostly Cloudy to Cloudy (7/10ths – 10/10ths)
No. Days	9	14	8

Daylight hours (official sunrise-to-sunset period, excluding 'Civil Twilight') through the month ranged from 14.1 hours (July 1) to 13.6 hours (July 31).

Metro Airport reported 3.44" of rain for July 2010, 2.52" below the monthly norm. After slightly above-normal totals for May and June, July is the 4th month of 2010 with below-average rainfall. July totals from selected sites around the greater metro area (Table 2) show quite a range, with Metro AP ranking among the "drier" of the sites in the region.

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Table 2: July 2010 rainfall for selected rainfall reporting stations across the greater Baton Rouge metro area. (Data are preliminary and provided courtesy of the National Weather Service, the LSU Southern Regional Climate Center, the USGS, and the LSU AgCenter.)

Rainfall-Recording Site	Monthly Rainfall	Monthly DFN	No. Days ≥ 0.01"	No. Days ≥ 1.00"
BR - Metro AP	3.44"	-2.52"	9	1
<i>NWS Cooperative Network Sites</i>				
BR - Concord Estates	3.67"	-2.21"	13	0
BR - Sherwood Forest	4.69"	-1.06"	11	1
Denham Springs	5.00"	-0.89"	14	1
Gonzales	3.61"	-2.60"	11	0
Livingston	9.06"	+3.73"	14	4
New Roads	3.40"	-1.34"	9	0
Oaknolia	9.71"	+4.45"	13	5
Port Allen	M	M	M	M
<i>USGS HydroWatch Selected Sites</i>				
Clinton (07377195)	6.78"	--	19	2
Zachary (07377750)	4.23"	--	17	0
Comite nr. Comite (07378000)	4.25"	--	13	1
Prairieville (07380102)	4.18"	--	11	2
Pt. Vincent (07380120) (0,1")	2.40"	--	10	0
French Settlement (07380200)	3.33"	--	13	0
<i>LSU AgCenter LAIS Automated Stations</i>				
LAIS - Ben Hur Farm	3.20"	--	16	0
LAIS - Burden Plantation	M	--	M	M
LAIS - St. Gabriel Res Sta	5.60"	--	16	3
<i>CoCoRaHS Volunteer Observers</i>				
Old Jefferson 0.9 W (LA-EB-21)	M	--	M	M
Shenandoah 0.8 W (LA-EB-36)	2.61"	--	12	0
Monticello 3.0 ENE (LA-EB-19)	3.68"	--	13	0
Brownfields 5.8 NE (LA-EB-9)	5.89"	--	12	1
Baton Rouge 2.5 E (LA-EB-27)	3.59"	--	10	1
Baton Rouge 2.7 SW (LA-EB-2)	3.62"	--	12	0
Zachary 3.5 WNW (LA-EB-28)	6.57"	--	12	3
LSU Campus (LA-EB-33)	4.94"	--	12	1
WAFB-TV, Downtown BR	4.31"	--	12	0

DFN - Departure-from-Normal
M - Monthly Report Unavailable
"--" - Normals Not Available

4 (i) - Monthly Report May Be Incomplete
(e) - Estimated Value
(0,1") - 0.1" resolution Only

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Livingston and Oaknolia stand as notable outliers in terms of rainfall, as both recorded in excess of 9" for the month, more than 2" greater than the next highest regional July rain total. At the other extreme, Port Vincent (USGS) and Shenandoah 0.8 W (CoCoRaHS) both recorded less than 3" of rain for the month. The regional average July rainfall, based on the 24 sites in Table 2, was 4.66" with a median of 4.21".

Even though most sites recorded below-average rainfall, rainday counts were in the double-digits for most locations and close to the 30-year average of 12.7 days at Metro AP. Most of the selected sites reported from 0 to 2 days with 1.0" or more, also close to the 30-year average of 1.8 days.

July reports from the Metro Airport ASOS weather platform included:

- 10 days with thunder, only about two-thirds of the long-term July average;
- 16 days with fog, including "dense" fog (visibility less than 1/4-mile) on July 17th;
- notable smoke and/or haze on five dates: July 1, 5, 10, 19 and 27.

July winds were generally light throughout the month -- the ASOS reported a monthly average wind speed of 5.1 mph for July 2010, roughly equal to the 25-year July average (5.2 mph). Daily wind speeds averaged below 5.0 mph on 16 July dates; daily average winds never reached 10.0 mph, although speeds approached 10.0 mph on July 12th and 13th.. Occasional, short-term increases in winds through the month were mainly associated with periods of stormy weather. Peak daily gusts at Metro AP topped 30 mph or more on four dates (July 1, 5, 17 & 27), with a monthly gust of maximum of 55 mph recorded on July 17th, generated by a strong thunderstorm.

The weekly ***U.S. Drought Monitor*** as of July 27th (Fig. 3) shows much of the Baton Rouge metro area experiencing "dry" to "moderate drought" conditions as of month's end, with the greater "dry-to-drought" intensities indicated for northern and western sections of the metro area. By contrast, areas south and east of metro Baton Rouge are excluded from any serious "dry/drought" designations.

Extended Climate Outlook:

Historically, extended-range outlooks for summer and early-fall precipitation show relatively poor "skill" (accuracy), and are generally unreliable. However, given trends in recent months and past summers, it seems reasonable to assume that August 2010 temperatures are likely to run above-normal for the region.

Tropical Weather Outlook:

As of the end of July, the 2010 Hurricane Season is running slightly "ahead of average" in terms of storm counts, with Category 2 Alex and T.S. Bonnie already on the books. Long-term statistics from the National Hurricane Center indicate an average of two 'named' storms in the Atlantic Basin by August 1st, but no hurricanes. Fortunately for Louisiana, Alex headed into northern Mexico, and Bonnie's threat to Louisiana disappeared as 'she' was ripped apart by mid/upper-level shearing winds as 'she' moved through the eastern Gulf.

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Figure 1: July 2010 *Daily Max/Min Temperatures and Precipitation* as recorded by the LSU AgCenter/LAIS Weather Station located at LSU-Ben Hur Farm (Nicholson Drive).

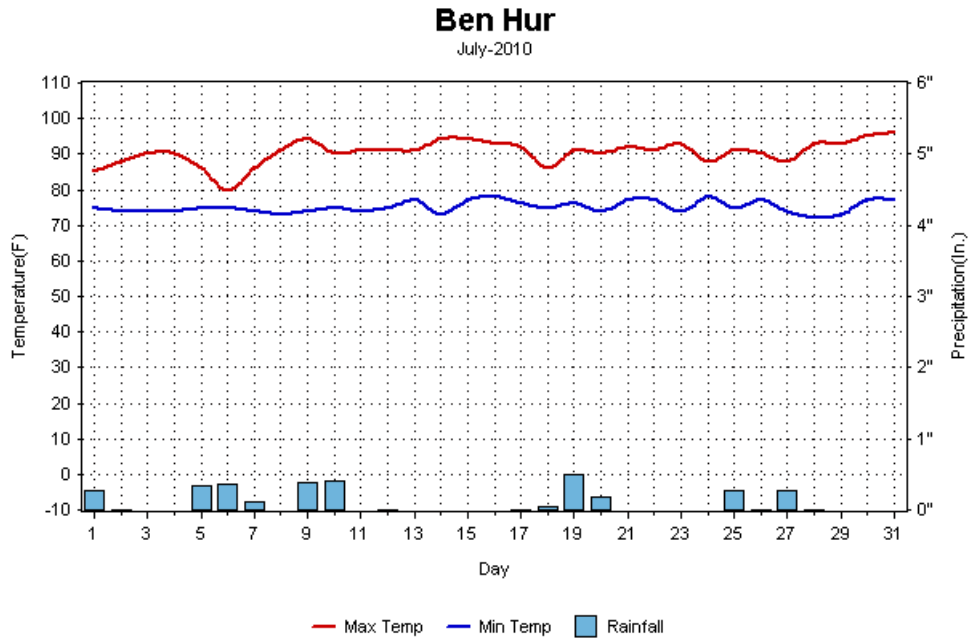
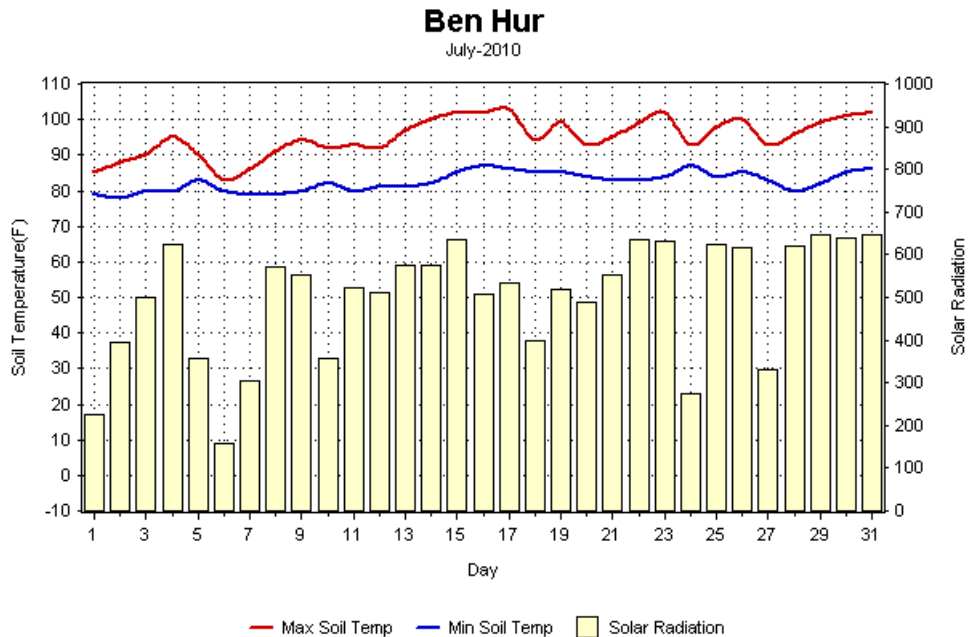


Figure 2: July 2010 *Daily Solar Radiation and Max/Min Soil Temperatures (4 in. depth)* as recorded by the LSU AgCenter/LAIS Weather Station located at LSU-Ben Hur Farm.



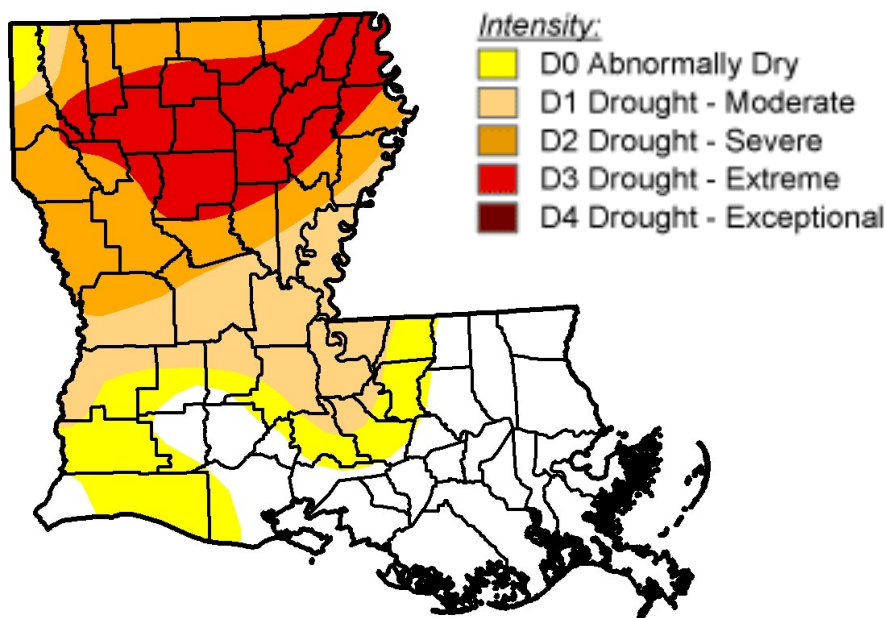
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Figure 3: Weekly **U.S. Drought Monitor** depiction for 27 July 2010.

Source: <http://drought.unl.edu/DM/>



Acknowledgements:

- National Weather Service offices serving Louisiana
- LSU Southern Regional Climate Center (SRCC)
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- U.S. Drought Monitor (<http://drought.unl.edu/DM/>)
- NWS Climate Prediction Center (NWS/CPC)
- NWS Storm Prediction Center NWS/SPC)
- NWS Hydrometeorological Prediction Center (NWS/HPC)
- NOAA/National Climatic Data Center (NCDC)
- USGS, Louisiana
- WAFB-TV (Ch. 9), Baton Rouge

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5 September 2010

*Jay Grymes, LSU AgCenter Climatologist and WAFB Chief Meteorologist, provides the climatology portion of this report as a free service to DEQ and the citizens of Louisiana.